

Serial No. 10/636,623

RECEIVED  
CENTRAL FAX CENTER  
DEC 09 2005**LISTING OF CLAIMS**

The following listing of claims replaces all previous versions, and listings, of claims in the present application.

1. (Currently Amended) A system for activating a passenger-protecting device mounted on an automotive vehicle according to behavior of the vehicle, the activating system comprising:  
an angular velocity sensor for detecting rolling angular velocity of the vehicle;  
means for calculating a difference between two angular velocities detected in a predetermined time interval;  
means for determining that the vehicle is rolling over when the difference between two angular velocities exceeds a predetermined value, the determining being made solely based on the difference between the two angular velocities; and  
means for activating the passenger-protecting device when the determining means determines that the vehicle is rolling over.

2. (Currently Amended) A system for activating a passenger-protecting device mounted on an automotive vehicle according to behavior of the vehicle, the activating system comprising:  
an angular velocity sensor for detecting rolling angular velocity of the vehicle;  
first calculating means for calculating a difference between two rolling angular velocity values detected in the angular velocity sensor over a predetermined time interval;  
second means for calculating a rolling angle of the vehicle based on the angular velocity detected by the angular velocity sensor;  
first determining means for determining that the vehicle is rolling over, the determining being made first based on whether the difference calculated by the first means for calculating

Serial No. 10/636,623

exceeds a predetermined value, and second based on the rolling angle calculated by the second determining means, if the difference does not exceed the predetermined value; and when the detected rolling angle velocity and the calculated rolling angle satisfy a predetermined threshold;  
second calculating means for calculating a difference between two angular velocities detected in a predetermined time interval;

second determining means for determining that the vehicle is rolling over when the difference between two angular velocities exceeds a predetermined value; and

means for activating the passenger-protecting device when either the first or the second determining means determines that the vehicle is rolling over.

3. (Withdrawn) A system for activating a passenger-protecting device mounted on an automotive vehicle according to behavior of the vehicle, the activating system comprising:

an angular velocity sensor for detecting rolling angular velocity of the vehicle;

first calculating means for calculating a rolling angle of the vehicle based on the angular velocity detected by the angular velocity sensor;

means for determining that the vehicle is rolling over when the detected angular velocity and the calculated rolling angle satisfy a predetermined threshold;

means for activating the passenger-protecting device when the determining means determines that the vehicle is rolling over;

second calculating means for calculating a difference between two angular velocities detected by the angular velocity sensor in a predetermined time interval; and

means for changing the predetermined threshold according to the difference between two angular velocities.

BEST AVAILABLE COPY

Serial No. 10/636,623

4. (Withdrawn) The system for activating a passenger-protecting device as in claim 3, wherein:

the predetermined threshold defines a rollover region and a non-rollover region on a two-dimensional coordinate having an abscissa showing the rolling angle thereon and an ordinate showing the angular velocity thereon, the non-rollover region being located in an area including the origin of the two-dimensional coordinate; and

the determining means determines that the vehicle is rolling over when a locus of the detected angular velocity and the calculated rolling angle on the two-dimensional coordinate crosses the threshold and enters into the rollover region from the non-rollover region.

5. (Withdrawn) The system for activating a passenger-protecting device as in claim 4, wherein:

the changing means moves the predetermined threshold toward the origin of the two-dimensional coordinate as the difference between two angular velocities becomes larger.

6. (Original) The system for activating a passenger-protecting device as in claim 1, wherein:

the passenger-protecting device includes at least one device selected from a group consisting of a curtain airbag, a seatbelt with a pretensioner and a device for repeatedly winding a seatbelt by a motor.

Serial No. 10/636,623

7. (Original) The system for activating a passenger-protecting device as in claim 2,  
wherein:

the passenger-protecting device includes at least one device selected from a group  
consisting of a curtain airbag, a seatbelt with a pretensioner and a device for repeatedly winding  
a seatbelt by a motor.

8. (Withdrawn) The system for activating a passenger-protecting device as in claim 3,  
wherein:

the passenger-protecting device includes at least one device selected from a group  
consisting of a curtain airbag, a seatbelt with a pretensioner and a device for repeatedly winding  
a seatbelt by a motor.

9. (New) The system for activating a passenger-protecting device as in claim 1, wherein  
the predetermined time interval is between 25 and 100 milliseconds.

10. (New) The system for activating a passenger-protecting device as in claim 2,  
wherein the predetermined time interval is between 25 and 100 milliseconds.

11. (New) A system for activating a passenger-protecting device mounted on an  
automotive vehicle according to behavior of the vehicle, the activating system comprising:

an angular velocity sensor for detecting a first rolling angular velocity of the vehicle at a  
first time and for detecting a second rolling angular velocity of the vehicle at a second time after  
the first time;

BEST AVAILABLE COPY

Serial No. 10/636,623

a calculating element for determining a difference between the first and second rolling angular velocities;

a roll detector for determining whether the vehicle is rolling over based solely on whether the difference between the first and second rolling angular velocities exceeds a predetermined value; and

an activation element for activating the passenger-protecting device when the roll detector determines that the vehicle is rolling over.

12. (New) The system for activating a passenger-protecting device as in claim 10, wherein the difference between the first and second times is between 25 and 100 milliseconds.

13. (New) The system for activating a passenger-protecting device as in claim 11, wherein:

the passenger-protecting device includes at least one device selected from a group consisting of a curtain airbag, a seatbelt with a pretensioner, and a device for repeatedly winding a seatbelt by a motor.

BEST AVAILABLE COPY